

III. "On a Sun-Spot observed August 31, 1880." By J. N. LOCKYER, F.R.S. Received October 26, 1880.

The recent activity in solar spots has enabled me to test the hypothesis I put before the Society on December 12th, 1878, by observing whether the velocity of the up-rush or down-rush of the so-called iron vapour in the sun was registered equally by all the iron lines, as it should be on the received hypothesis.

The observations already made, though few in number, indicate that while motion is shown by the change of refrangibility of some lines, other adjacent lines indicate a state of absolute rest. Thus, in an observation of a sun-spot on August 31st, 1880, when the iron line at $5207\cdot6$ was doubly contorted, indicating an ascending and descending velocity of about fifteen miles a second, the two adjacent iron lines at λ $5203\cdot7$ and $5201\cdot6$, visible in the same field of view, were unaffected.

I send this paper to the Royal Society with all reserve, in order to call the attention of other observers to the point, as I fear it is only too probable that foggy weather will stop all observations here.

IV. "On Methods of Preparing Selenium and other Substances for Photophonic Experiments." By Professor GRAHAM BELL. Communicated by the PRESIDENT.

[Publication deferred.]